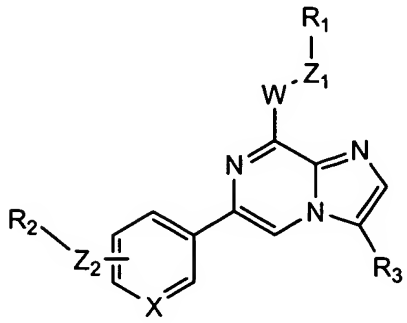
ABSTRACT OF THE DISCLOSURE

This invention pertains to compounds of Formula I:



(Formula I)

and the pharmaceutically-acceptable forms thereof.

The variables R_1, R_2, R_3, Z_1, Z_2, W, and X shown in Formula I are defined herein.

The invention also provides pharmaceutical compositions containing one or more compound of Formula I, or pharmaceutically acceptable form of such compounds, and one or more pharmaceutically acceptable carriers, excipients, or diluents.

The invention further comprises methods of treating patients suffering from certain diseases and disorders responsive to Hsp90 complex modulation, which comprise administering to such patients an amount of a compound of Formula I effective to reduce signs or symptoms of the disease or disorder. These diseases include cancer, including chronic myeloid leukemia, melanoma, breast, ovarian, brain, thyroid, colorectal, prostate, and bladder cancer, heart disease, stroke, autoimmune/inflammatory diseases, and neurodegenerative diseases. Thus methods of treatment include administering a sufficient amount of a compound of Formula I or form thereof to decrease the symptoms or slow the progression of these diseases or disorders.

The invention also encompasses methods of treating non-human patients, including livestock and domesticated companion animals, suffering from a disease or disorder responsive to Hsp90 complex modulation.

Methods of treatment include administering a compound of Formula I as a single active agent or administering a compound of Formula I in combination with one or more other therapeutic agent.

The invention also includes a method for determining the presence of certain kinases or Hsp90 complex in a sample, comprising contacting the sample with a compound of Formula I or form thereof, and detecting Hsp90 complex activity in the sample.